CASE REPORT

Novel Presentation of Labial Synechiae: Two Urinary Streams

Goel Prabudh · Gupta Chhabi Ranu ·
Manchanda Vivek · Jain Vishesh

Received: 13 June 2012 / Accepted: 24 July 2012 / Published online: 12 April 2013
© Federation of Obstetric & Gynecological Societies of India 2012

Introduction

Labial synechiae, also referred to as labial adhesion or labial agglutination, is a disorder of the female genitalia characterized by thin, membranous adherence of the labia minora. Typically, the fusion originates from the posterior fourchette and advances toward the clitoris. Complete labial fusion may conceal the vaginal introitus completely. Partial labial fusion is also possible and may occur near the posterior fourchette.

Case Report

A 4-year-old girl presented to our hospital with complaints of double urinary stream. There were no symptoms of urinary obstruction, infection, or post micturition dribbling of urine.

Goel P., Assistant Professor
Department of Pediatric Surgery, CSM Medical University
(Erstwhile King George's Medical College), Lucknow, India

Gupta C. R., Assistant Professor ·
Manchanda V., Assistant Professor · Jain V., Assistant Professor
Department of Pediatric Surgery, Chacha Nehru Bal Chikitsalaya
Hospital, Maulana Azad Medical College, Geeta Colony,
Delhi 110031, India

Goel P. (✉), Assistant Professor
House No 163/9 Civil Lines, Baijal Compound, Behind NIIT,
Meerut 250001, UP, India
e-mail: drprabudhgoel@gmail.com

The child was observed while she voided in two urinary streams. The “front” stream was directed upwards and forwards, while the “hind” stream was directed posteriorly. Both the streams were of reduced strength. She seemed to strain while trying to void. Local examination in the lithotomy position revealed labial synechiae involving the middle part of the labia minora. There was no synechiae at the posterior fourchette or anteriorly close to the clitoris. The synechiae was separated manually with the help of a probe. The vulval anatomy was unremarkable. The child was observed again as she voided in a single stream.

Discussion

In the index case, the labial fusion was partial, but against the typical description, it involved the middle portion of the labia minora. The labiae were free posteriorly close to the posterior fourchette and anteriorly close to the clitoris. As a result of this, the urinary stream encountered the labial shelf while exiting from the external urethral meatus. A major portion of this was deflected posteriorly from the triangle between the posterior fourchette and the posterior ends of the labiae. A small volume of urine was deflected anteriorly and exited from the space between the anterior ends of the labiae and the clitoris. This was the basis of the double urinary stream (Fig. 1).

Leung et al. [1] demonstrated a 1.8 % incidence of labial synechiae in a prospective study on 1970 subjects in a pediatric outpatient clinic. The peak incidence (3.3 %)

Fig. 1 **a** Clinical picture before release of the labial synechiae. Point “1” highlights the site of exit of the front stream. This is anterior to the labial synechiae, posterior to the clitoris, and between the anterior parts of the two labia minora. Point “2” highlights the labial synechiae involving the middle part of the labia minora. Point “3” highlights the site of exit of the hind urinary stream. This is posterior to the labial synechiae, anterior to the posterior fourchette, and between the posterior parts of the two labia minora. **b** Clinical picture after release of labial synechiae

was reported between 13 and 23 months of age. There is no literature to suggest any racial predilection. Most of the cases are asymptomatic and are noticed by the mother during bathing or during routine vulval examination by the pediatrician. Symptoms, when present, may be obstructive (dysuria or deflected urinary stream) or related to post micturition incontinence. When the child voids in the sitting position, a small volume of urine pools above the labial “shelf” or in the lower vagina. This is followed by dripping in the undergarments when the child attains an upright position. Complete labial fusion may occasionally be mistaken for complete atresia of, or a membrane occluding, the vagina. Occasionally, labial synechiae may be noted in children with urinary tract or vaginal infection.

Labial synechiae is not a congenital disorder. None of the 9,070 female infants were found to have labial synechiae in a retrospective study by Leung et al. [1]. Synechiae is probably the result of chronic inflammation as a result of vulvovaginitis or chronic dampness resulting from urinary incontinence. Few layers of epithelial cells may denude from the labia minora and apposition of the eroded areas can result in labial synechiae formation. The relative hypoestrogenic state has been postulated to be the cause behind its prevalence in childhood and in elderly women. Caglar [2], however, failed to demonstrate any statistical difference between the serum estrogen levels in infants with and without labial synechiae. Labial synechiae has also been reported secondary to childhood sexual abuse and may be related to consequential lacerations or hematoma formation. The use of nappies has also been incriminated as a cause. Labial synechiae has also been reported in reproductive age women in the immediate postpartum

period and following female circumcision, lichen sclerosis, genital herpes, diabetes, pemphigoid, caustic vaginitis, and severe monilial infection.

Abnormalities of the internal genitalia and the urinary system are not associated with labial synechiae. Treatment is not warranted for asymptomatic labial synechiae. Reassurance of the parents and periodic observation usually suffice. Spontaneous resolution has been observed at the onset of puberty and has been correlated with the rise in the estrogen level. Topical application of estrogen has been recommended in symptomatic patients with success rates varying from 47 to 100 %. Myers et al. [3] reported 68 % success with use of 0.05 % betamethasone cream and a 23 % recurrence in a maximal follow-up period of 24 months.

Manual separation in the form of steady, gentle pressure to stretch the labia apart with or without application of a local anesthetic has been recommended. Application of local anesthetic allows the use of a local probe to facilitate the job. Local ooze may be present, but is never severe enough to initiate any hemostatic measure. Local application of emollients for a few days after the maneuver allows time for reepithelialization and prevents reformation of labial synechiae. The main criticism behind manual separation is physical and emotional trauma to the patient. Surgical lysis under general anesthesia may be required for dense and fibrous adhesions. However, surgery may result in the development of fibrous tissue and thickened adhesions.

Labial synechiae presenting as a double urinary stream has not been reported in the English medical literature. We would also like to emphasize the importance of complete clinical examination in all cases before subjecting the child to unnecessary investigations. This child had a problem which perplexed the parents, but proper clinical examination led to instant diagnosis and management. The prognosis for girls with labial synechiae is excellent. The condition may even resolve spontaneously if left untreated. However, the psychologic impact on the parents of the girl child may be significant and calls for counseling and reassurance.

Acknowledgments We acknowledge the support of Professor Anup Mohta in the preparation of this report.

References

1. Leung AK, Robson WL, Tay-Uyboco J. The incidence of labial fusion in children. *J Paediatr Child Health*. 1993;29:235–6.
2. Caglar MK. Serum estradiol levels in infants with and without labial adhesions: the role of estrogen in the etiology and treatment. *Pediatr Dermatol*. 2007;24:373–4.
3. Myers JB, Sorensen CM, Wisner BP, et al. Betamethasone cream for the treatment of pre-pubertal labial adhesions. *J Pediatr Adolesc Gynecol*. 2006;19:407–11.